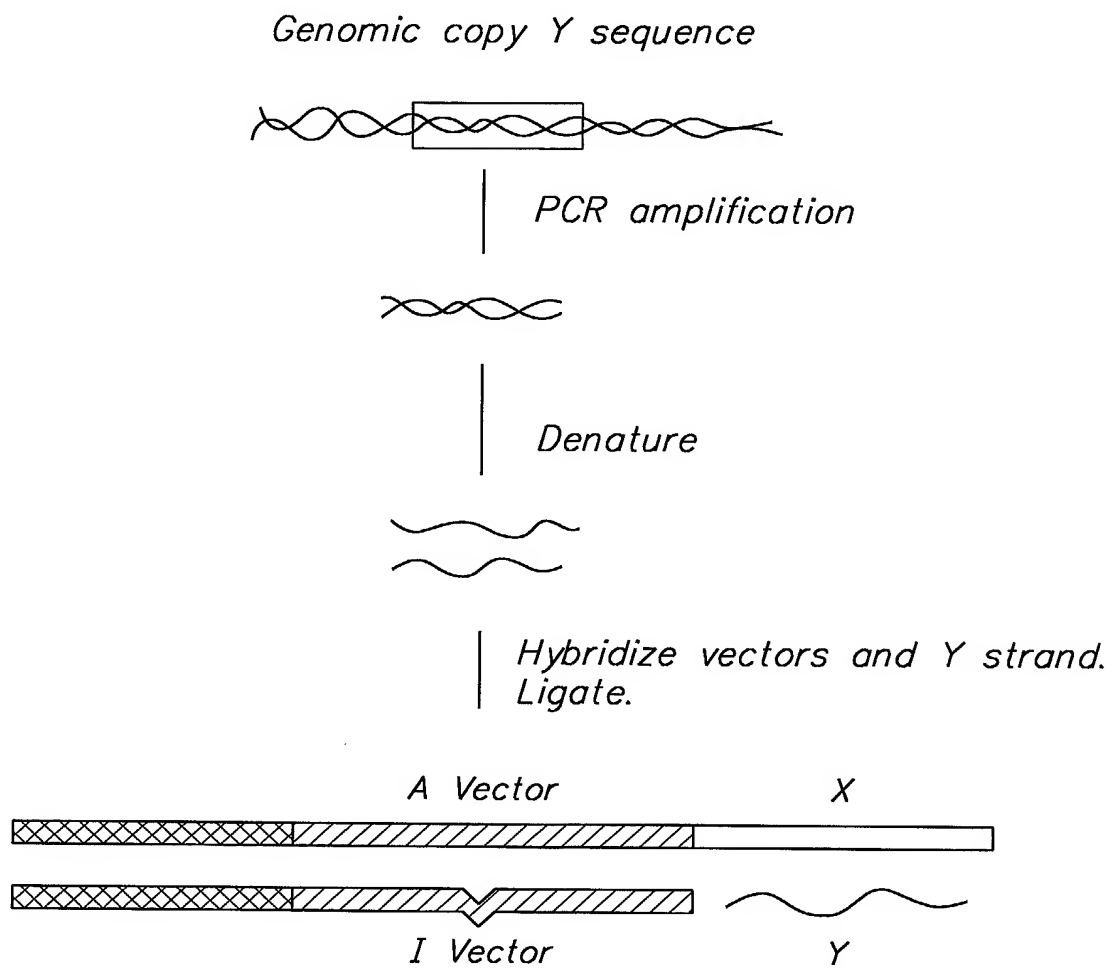
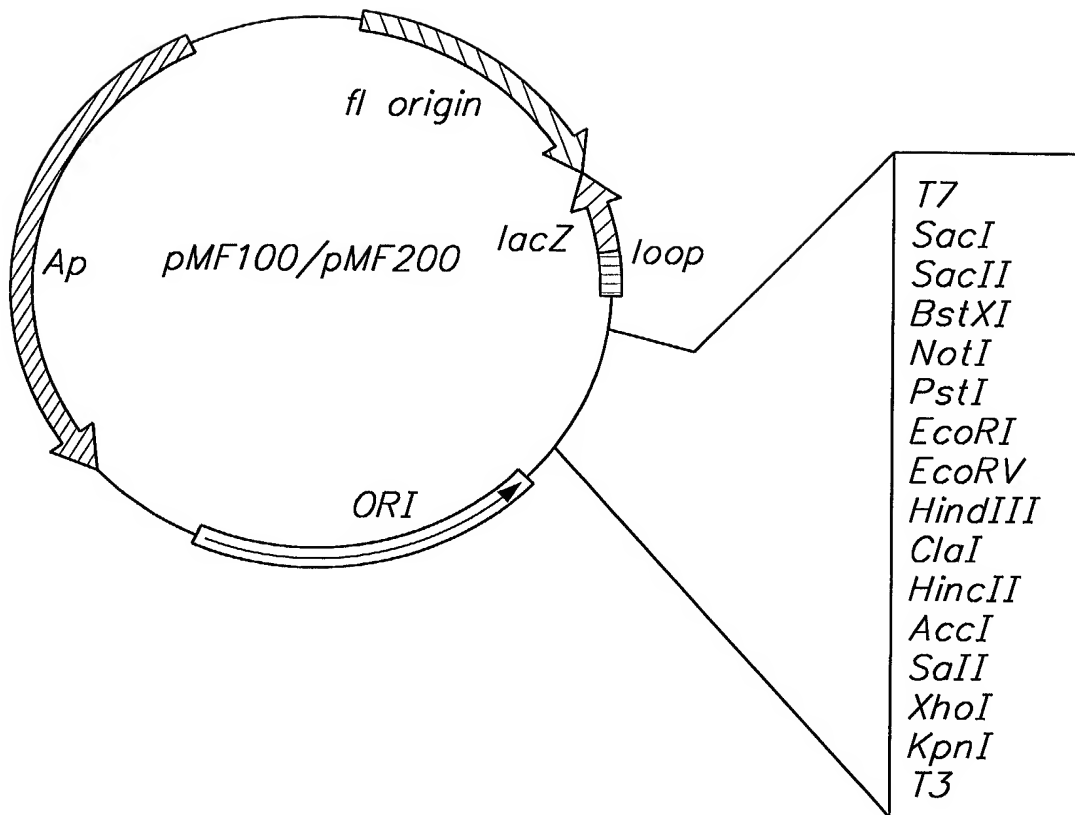
**FIG. 1**

**FIG. 2**

**FIG. 3**

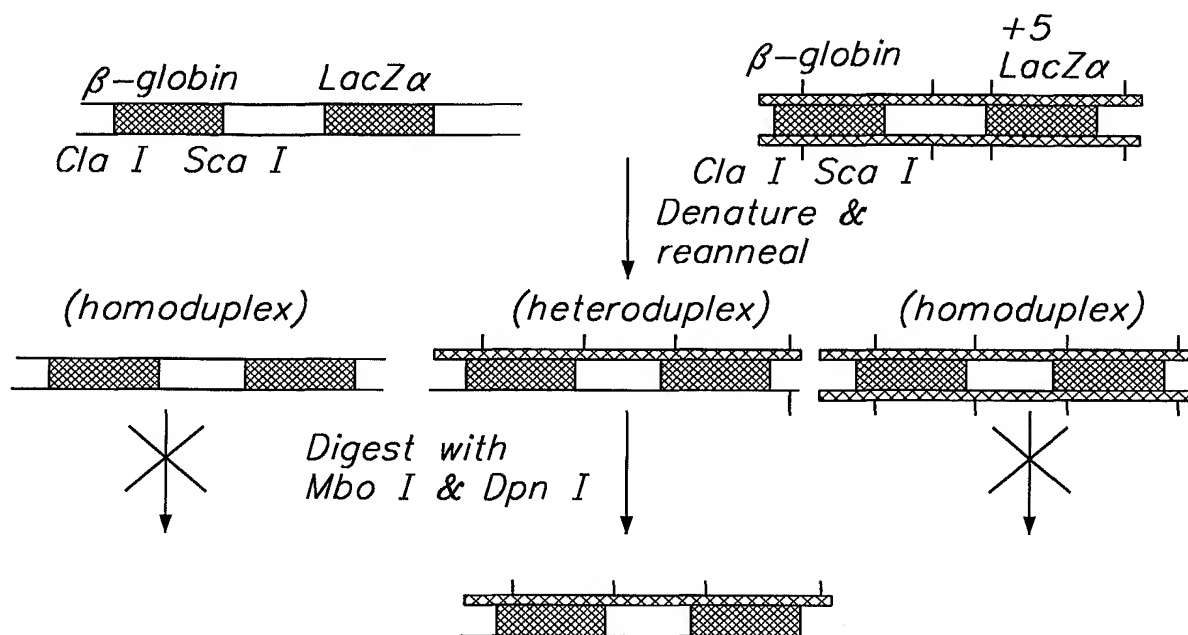
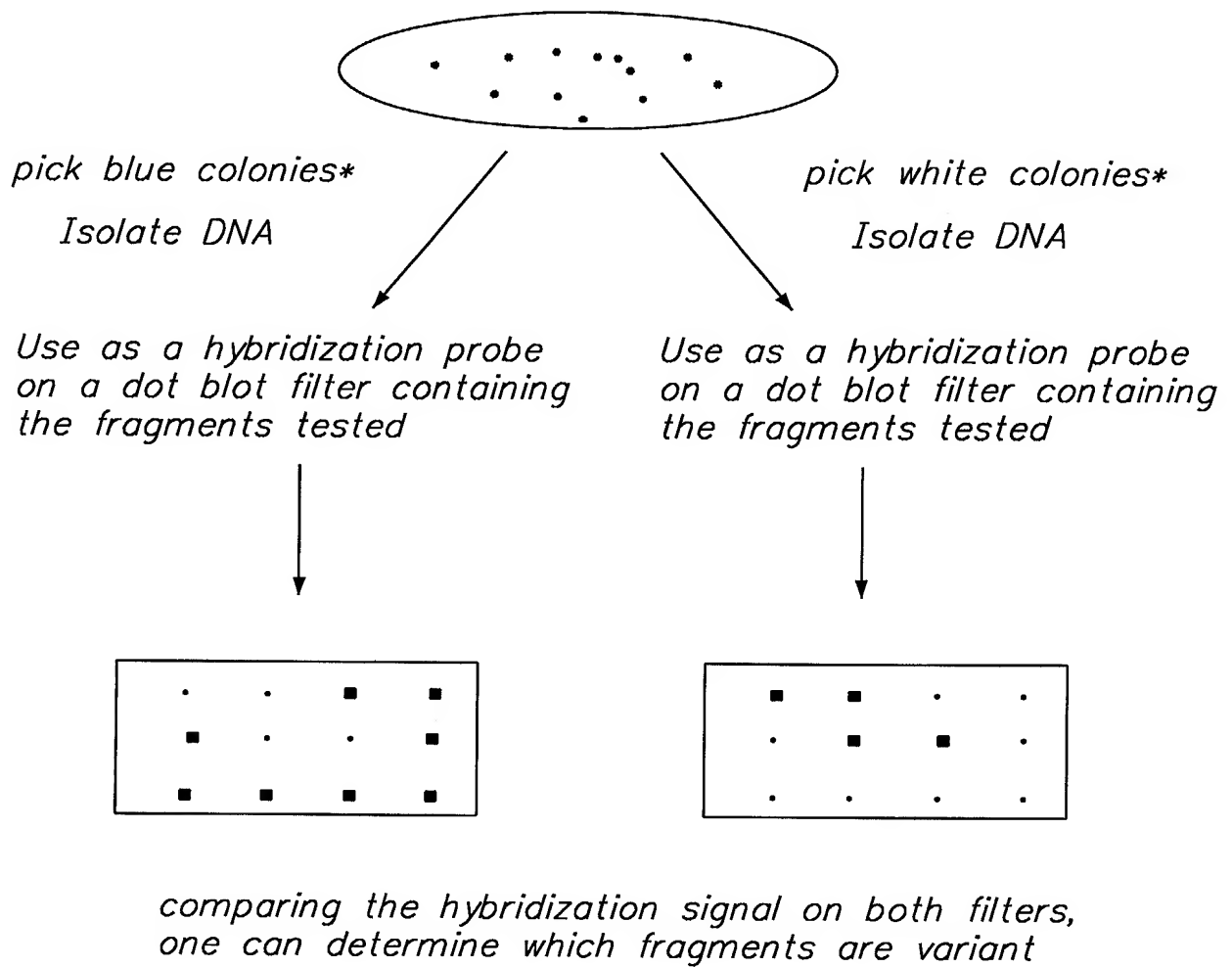


FIG. 4

**FIG. 5**

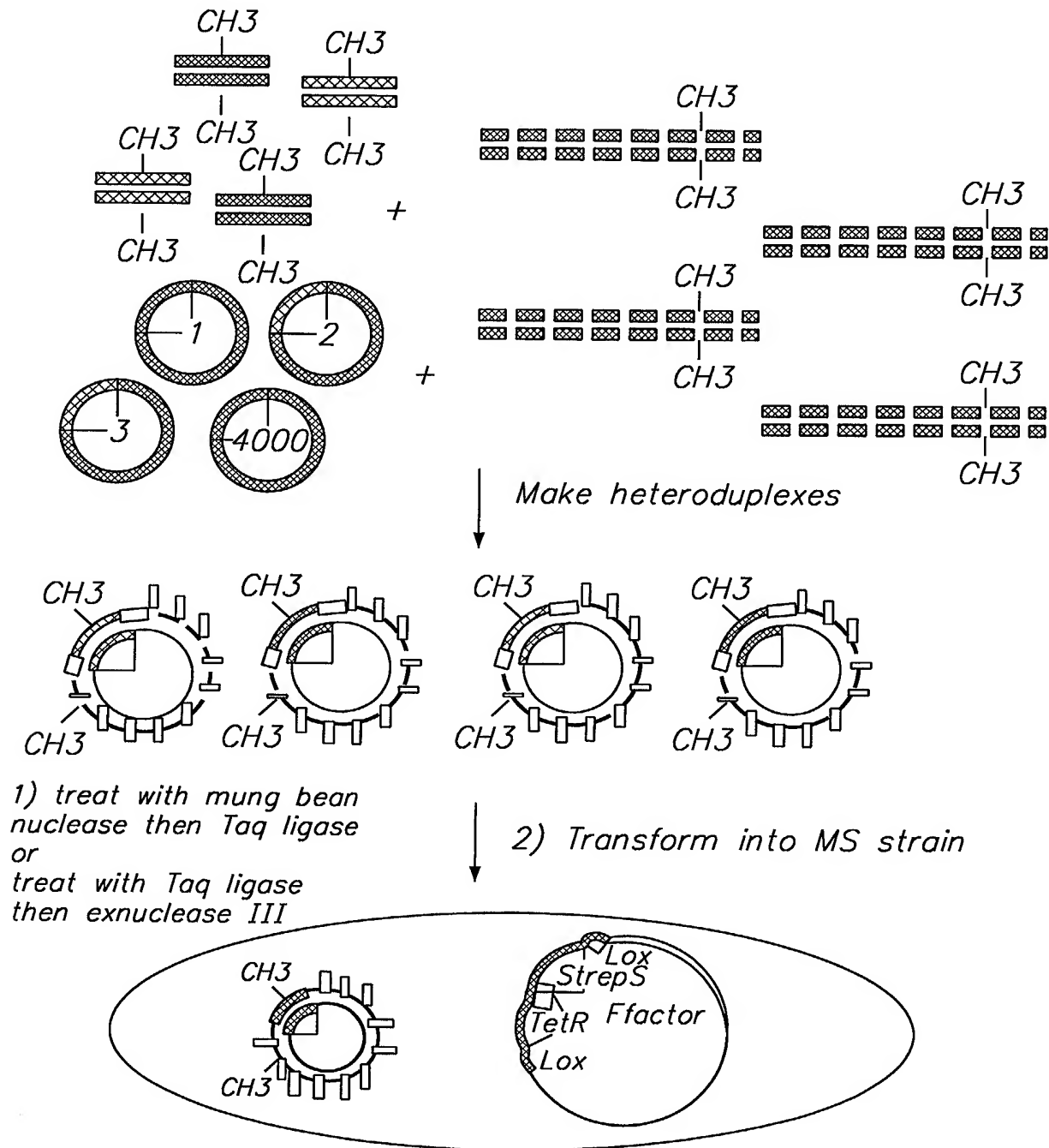
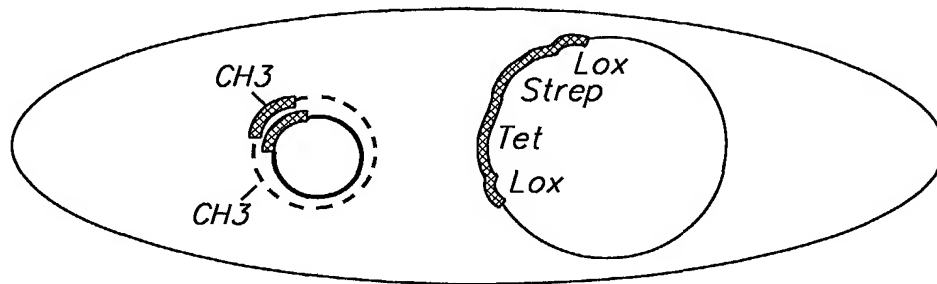
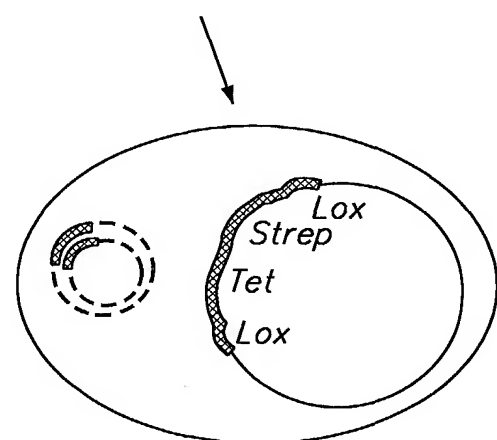
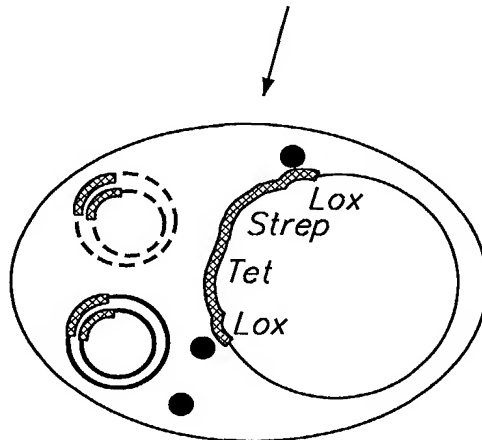


FIG. 6A



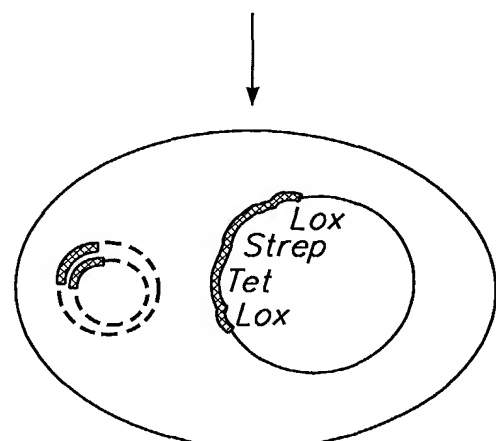
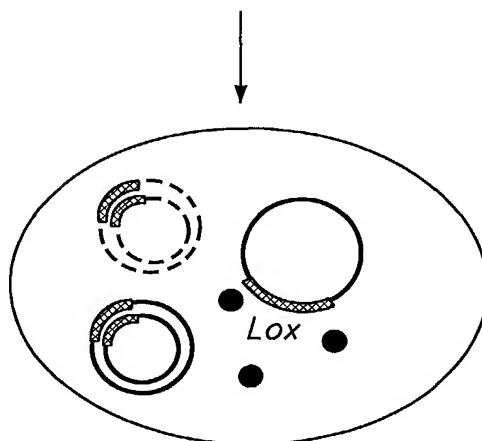
*In absence of a variation,
no repair occurs.
Both strands are replicated*

*In presence of a variation,
repair occurs. Only the
strand w/inactive Cre is replicated*



Active Cre is present in the cell

Active Cre is absent in the cell



*Cell is Tet sensitive
& Strep resistant*

*Cell is Tet resistant
& Strep sensitive*

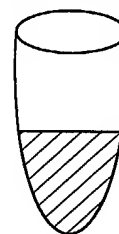
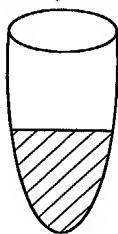
FIG. 6B

Cells are grown in two tubes supplemented either with

Tetracycline

or

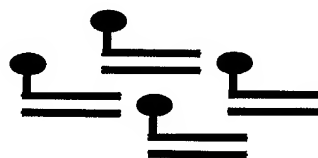
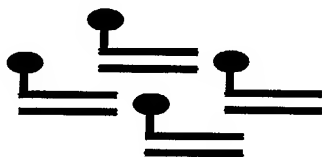
Streptomycin



Next day DNA is preped from the pool of the cells grown in each tube

DNA from the Tet pool is labeled with green fluorescence

DNA from the Strep pool is labeled with red fluorescence



*DNA from both pools are mixed and hybridized to a DNA microarray.
Each spot corresponds to a different gene fragment that is being tested*

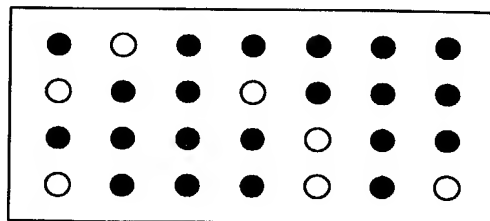
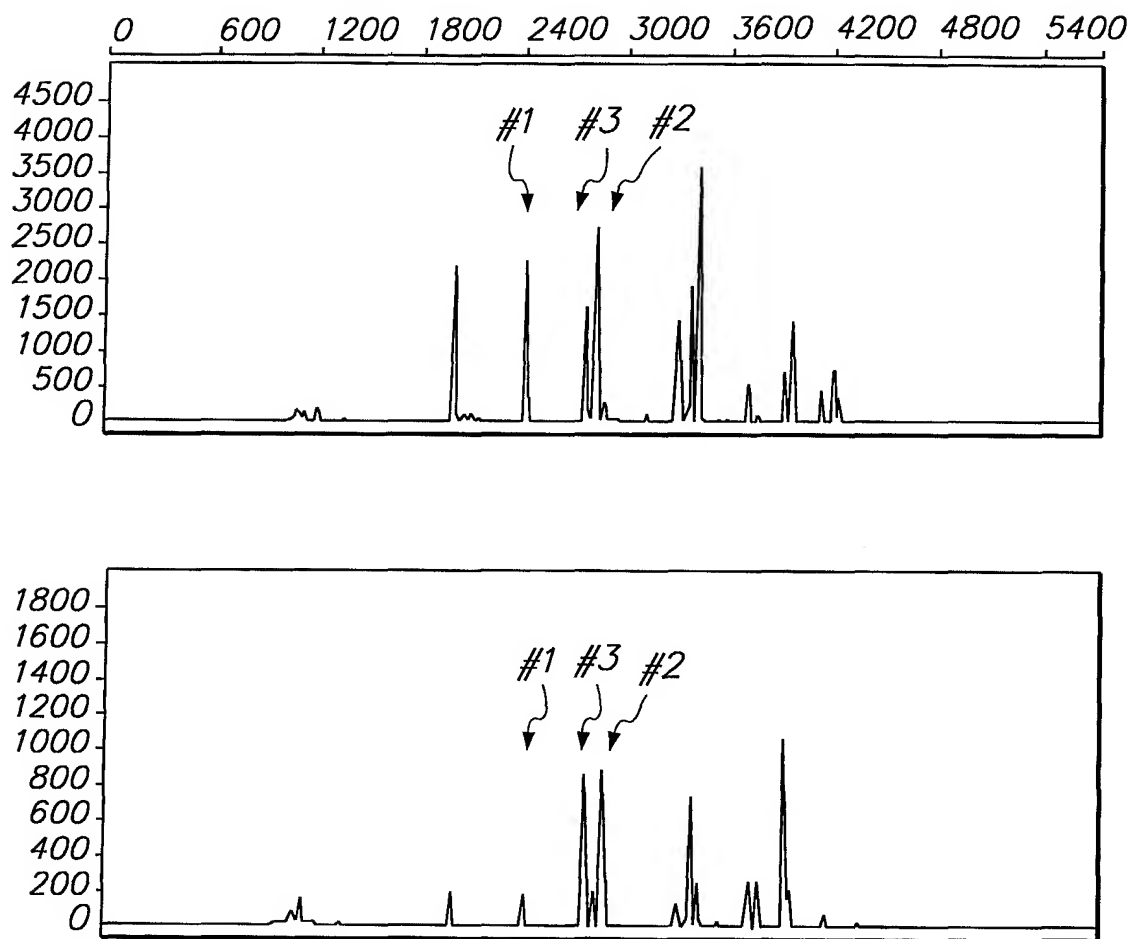


FIG. 6C

**FIG. 7**